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54 Diagnosing and treating chronic fatigue syndrome.

57 Chronic Fatigue Syndrome is diagnosed and distinguished from other conditions presenting a similar clinical appearance by assessing the 2'-5'A oligonucleotide levels in the patient's circulating peripheral leucocytes and comparing the result obtained to that of healthy individuals. Double-stranded RNAs, notably mismatched dsRNAs, when administered in appropriate amounts, increase the 2'-5'A in patients with Chronic Fatigue Syndrome to normal levels and improve the clinical symptoms.

EP 0 350 151 A3



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EUROPEAN SEARCH REPORT

Application Number

EP 89 30 4188

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 5)
E	EP-A-0 306 347 (HEM RESEARCH, INC.) * Whole document * ---	1-8	A 61 K 31/70
E	EP-A-0 299 745 (HEM RESEARCH, INC.) * Column 5, lines 12-21 * ---	1-8	
E	EP-A-0 285 263 (HEM RESEARCH, INC.) * Whole document * ---	1-8	
X	THE LANCET, 6th June 1987, pages 1286-1292; W.A. CARTER et al.: "Clinical, immunological, and virological effects of ampligen, a mismatched double-stranded RNA, in patients with aids of aids-related complex" * Whole document * ---	1-8	
X	EP-A-0 213 921 (HEM RESEARCH, INC.) * Whole document * ---	5-8	
X	PROCEEDINGS OF THE 24TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY, New Orleans, Louisiana, 22nd - 24th May 1988, vol. 7, page 2, abstract 6; D.R. STRAYER et al.: "Clinical improvement and immunological/virological effects of ampligen therapy in ARC/PRE-ARC patients" * Abstract * --- -/-	1-8	TECHNICAL FIELDS SEARCHED (Int. Cl. 5) A 71 K C 07 H C 12 Q
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12-07-1990	Examiner FOERSTER W.K.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



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X	PROCEEDINGS OF THE 23RD ANNUAL MEETING OF THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY, Atlanta, Georgia, 17th - 19th May 1987, vol. 6, abstract 8; W.A. CARTER et al.: "Clinical improvement of patients with HIV-related immune dysfunction on mismatched dsRNA (ampligen) therapy" * Abstract *	1-8													
X	JOURNAL OF BIOLOGICAL RESPONSE MODIFIERS, vol. 4, 1984, pages 669-675, Raven Press, New York, US; I. BRODSKY et al.: "Clinical studies with ampligen (mismatched double-stranded RNA)" * Page 673 *	5-8													
X,Y	AIDS RESEARCH, vol. 2, no. 2, 1986, pages 127-131, Mary Ann Liebert, Inc., Publishers; J.M. WU et al.: "Diagnostic value of the determination of an interferon-induced enzyme activity: Decreased 2',5'-oligoadenylate dependent binding protein activity in aids patient lymphocytes" * Whole article *	1-4													
Y	NUCLEIC ACIDS RESEARCH, vol. 9, no. 7, 1981, pages 1571-1581, IRL Press Ltd, London, GB; D.H. WRESCHNER et al.: "Ribosomal RNA cleavage, nuclease activation and 2-5A (ppp(A2'p)nA) in interferon-treated cells" * Whole article *	1-8													
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<table border="0"><tr><td>CATEGORY OF CITED DOCUMENTS</td><td>T : theory or principle underlying the invention</td></tr><tr><td>X : particularly relevant if taken alone</td><td>E : earlier patent document, but published on, or after the filing date</td></tr><tr><td>Y : particularly relevant if combined with another document of the same category</td><td>D : document cited in the application</td></tr><tr><td>A : technological background</td><td>L : document cited for other reasons</td></tr><tr><td>O : non-written disclosure</td><td>& : member of the same patent family, corresponding document</td></tr><tr><td>P : intermediate document</td><td></td></tr></table>				CATEGORY OF CITED DOCUMENTS	T : theory or principle underlying the invention	X : particularly relevant if taken alone	E : earlier patent document, but published on, or after the filing date	Y : particularly relevant if combined with another document of the same category	D : document cited in the application	A : technological background	L : document cited for other reasons	O : non-written disclosure	& : member of the same patent family, corresponding document	P : intermediate document	
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Y	CELL, vol. 43, 1985, pages 793-800; J.N. ZULLO et al.: "Platelet-derived growth factor and double-stranded ribonucleic acids stimulate expression of the same genes in 3T3 cells" * Whole article *	1-8	
Y	EUROPEAN J. BIOCH., vol. 143, 1984, pages 165-174; P.J. CLAVEY et al.: "Activation of the ppp(A2'p)nA system in interferon-treated, herpes simplex virus-infected cells and evidence for novel inhibitors of the ppp(a2'p)nA-dependent RNase" * Whole article *	1-8	
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